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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/712,247 | 11/15/2000 | Keiichi Kusumoto | 43889-996 | 8727 |

20277 7590 05/07/2004
MCDERMOTT WILL & EMERY
600 13TH STREET, N.W.
WASHINGTON, DC 20005-3096

EXAMINER

LUGO, DAVID B

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2634

DATE MAILED: 05/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/712,247

Applicant(s)

KUSUMOTO ET AL.

Examiner

David B. Lugo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 11-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 5-10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2, 5-7.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Species I (claims 1-10), in Paper No. 9 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 11-17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 9. It is suggested that a reply to this Office action include cancellation of the nonelected claims.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

4. Claims 1-10 are objected to because of the following informalities:
 - a. Claim 1, lines 12 and 23, "preparation period" should be --each preparation period--.
 - b. Claim 1, lines 14 and 26, "transmission period" should be --each transmission period--.
 - c. Claim 1, line 20, "the input" should be --an input--.
 - d. Claim 1, line 21, "the output" should be --an output--.
 - e. Claim 2, lines 12 and 25, "preparation period" should be --each preparation period--.

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- f. Claim 2, lines 14 and 28, "transmission period" should be --each transmission period--.
- g. Claim 3, lines 12, 25 and 27, "preparation period" should be --each preparation period--.
- h. Claim 3, line 14, "transmission period" should be --each transmission period--.
- i. Claim 4, lines 12 and 25, "preparation period" should be --each preparation period--.
- j. Claim 4, line 14, "transmission period" should be --each transmission period--.
- k. Claim 5, lines 14 and 33, "preparation period" should be --each preparation period--.
- l. Claim 5, line 19, "transmission period" should be --each transmission period--.
- m. Claim 6, line 4, "preparation period" should be --each preparation period--.
- n. Claim 7, line 4, "transmission period" should be --each transmission period--.
- o. Claim 8, line 2, "either one" should be --a circuit block--.
- p. Claim 8, line 7, "each of the first circuit block group" should be --each circuit block of the first circuit block group--.
- q. Claim 9, line 2, "either one" should be --a circuit block--.
- r. Claim 9, line 23, "each of the second circuit block group" should be --each circuit block of the second circuit block group--.
- s. Claim 9, line 33, "preparation period" should be --each preparation period--.
- t. Claim 10, line 8, "each" should be --circuit blocks--.

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u. Claim 10, line 9, "each of the first circuit block group" should be --each of the circuit blocks of the second circuit block group--.

v. Claim 10, line 40, "preparation period" should be --each preparation period--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: connection between the transmitting capacitor, the input switch, the transmitting switch and the signal line.

8. It is noted that such a relationship is recited in claims 5-10, where the input switch is said to supply a supplied input digital signal to the transmitting capacitor, and the transmitting switch connects the transmitting capacitor to the signal line.

Allowable Subject Matter

9. Claims 1-4 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, and the objections set forth in this Office action.

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10. Claims 5-10 would be allowable if amended to overcome the objections set forth in this Office action.

11. The following is a statement of reasons for the indication of allowable subject matter:

Cooperman U.S. Patent 4,630,284 and Kondoh U.S. Patent 5,661,417 disclose signal transmission circuits for transmitting a digital signal from a transmitting circuit to a receiving circuit. However, the prior art of record does not disclose that the transmitting circuit comprises an input switch for setting a voltage in accordance with a logic level of a supplied input digital signal in a transmitting capacitor at a preparation period, and a transmitting switch for generating a small voltage change in the signal line at each transmission period, the voltage change being in accordance with a voltage of the transmitting capacitor that is set during a preceding preparation period. Further, the prior art of record does not disclose that the receiving circuit includes a receiving capacitor inserted between an input terminal and an output terminal of an inverter, and an equalizing switch for short-circuiting the input terminal and the output terminal of the inverter so as to set a voltage of the receiving capacitor to a predetermined voltage at each preparation period, and a latch for supplying an output digital signal obtained by performing logic amplification of a voltage of the output terminal of the inverter at each transmission period.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **David B. Lugo** whose telephone number is **(703) 305-0954**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Stephen Chin**, can be reached at **(703) 305-4714**.

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Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

P.O. Box 1450

Alexandria, VA 22313-1450

or faxed to:

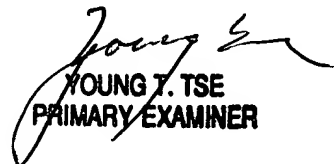
(703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

dl

4/30/04


YOUNG T. TSE
PRIMARY EXAMINER